Summary of the Response to the Office Action

Claims 1-29 remain now pending in this application, with claims 1-8 and 19-29 under consideration. Applicants respectfully traverse the rejection of claims 1-8 and 19-29 and the Office Action's interpretation of the applied references, and respectfully request reconsideration of this application, withdrawal of all rejections, and the timely allowance of all pending claims.

The Rejections under 35 U.S.C. § 103(a)

Claims 1-8 and 19-29 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Miura in view of Fujimoto. Applicants traverse the rejection of claims 1-8 and 19-29 under 35 U.S.C. § 103(a) and the Office Action's interpretation of the applied references for the following reasons.

In the instant invention as recited in each of independent claims 1, 7 and 19, a control means controls a supply means so that, "when the remaining amount of ink detected by the detecting means is above a lower limit, ink is supplied during non-recording time in an amount corresponding to the amount of ink used." Similarly, independent claim 25 recites: "when the remaining amount of ink detected by the remaining ink amount detecting means is above the lower limit, ink is supplied to the ink tank in an amount corresponding to the number of printed pixels." Applicants respectfully submit that neither Miura nor Fujimoto, whether taken singly or in combination, teaches or suggests the inkjet recording apparatus including the features of independent claims 1, 7, 19 and 25 recited above.

The Office Action asserts at page 2 that Miura discloses at column 5, lines 55-58, a control means for controlling the supply means. However, as recited at column 5, lines 60-63 of Miura, "when ink amount in the main tank becomes small, an alarm may be generated to a user

on the basis of the detection output from the sensor 108 to urge the user to supply the ink to the main tank." Applicants respectfully submit that in contrast, in the arrangements recited in independent claims 1, 7, 19 and 25, "when the remaining amount of ink detected by the detecting means is above a lower limit, ink is supplied." Applicants respectfully submit that Miura does not teach or suggest at least this particular feature of the arrangements recited in independent claims 1, 7, 19 and 25. Applicants further submit that this feature maintains a usually relatively large amount of ink in the ink tank, thereby reducing ink outage and formation of image defects during printing.

The Office Action asserts at page 3 that Miura discloses a predetermined value (lower limit as shown in Figure 12) is no more than an upper limit (upper limit line as shown in Figure 12) of the ink remaining in the ink tank. The Office Action states also that Miura discloses the claimed invention except for the present invention's recitation that ink is supplied during non-recording time. Applicants respectfully submit that Miura also does not teach at least the feature that "ink is supplied during non-recording time in an amount corresponding to the amount of ink used" as recited in each of independent claims 1, 7 and 19. Similarly, Miura does not teach or suggest the feature that "ink is supplied to the ink tank in an amount corresponding to the number of printed pixels" as recited in independent claim 25. As discussed at column 5, lines 55-63 of Miura, "when the ink amount in the main tank is small, an alarm may be generated to a user on the basis of the detection output from the sensor 108 to urge the user to supply the ink in the main tank. Moreover, as recited at column 11, lines 57-67 of Miura:

> [W]hile the ink amount is relatively large until detection of the liquid level by the liquid level sensor 108b, the rotation speed of the stirring member is set...[B]elow the liquid level to be detected by the liquid level sensor 108b and up to the liquid level to be detected by the liquid level sensor 108a, the stirring member is driven...With such construction, irrespective of the ink amount in the main tank, uniform stirring can be realized.

Thus, there is no teaching or suggestion in Miura for supplying ink in an amount corresponding to the amount of ink used or in an amount corresponding to the number of printed pixels.

Moreover, Applicants respectfully submit that Fujimoto fails to cure the deficiencies of Miura because Fujimoto does not teach the feature that "ink is supplied during non-recording time in an amount corresponding to the amount of ink used." In Fujimoto, as recited in its abstract and as depicted in Figure 2, ink is supplied within a predetermined amount of time and not in an amount corresponding to the amount of ink used as disclosed in the instant invention. In Figure 2 of Fujimoto, after image formation is completed at step S8, ink supplying starts at step S9 and stops at step S11 (see page 14 of the English Translation of Japanese Publication No. JP 10315493A filed on October 3, 2003, hereinafter "Fujimoto Translation"). Fujimoto Translation recites at page 9, paragraph [0029]: "after the image is formed, the ink is supplied for predetermined period of time."

As pointed out in MPEP § 2143.03, "[to] establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)." Thus, Applicants respectfully submit that claims 1, 7, 9 and 25 are patentable over the combination of Miura and Fujimoto. Moreover, Applicants submit that dependent claims 2-6, 8, 20-24 and 26-29 should be allowed for at least the same reasons as set forth above with regard to independent claims 1, 7, 19 and 25 upon which they depend, respectively, and for the additional feature that they recite. Accordingly, Applicants respectfully request that the rejection of claims 1-8 and 19-29 under 35 U.S.C. § 103(a) be withdrawn.